### (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

## (19) World Intellectual Property Organization International Bureau





## (43) International Publication Date 22 August 2002 (22.08.2002)

**PCT** 

# (10) International Publication Number WO 02/065176 A1

(51) International Patent Classification7:

G02B 6/255

(21) International Application Number: PCT/SE02/00264

(22) International Filing Date: 14 February 2002 (14.02.2002)

(25) Filing Language:

Swedish

(26) Publication Language:

English

(30) Priority Data:

0100488-6

14 February 2001 (14.02.2001) SI

- (71) Applicant (for all designated States except US): TELE-FONAKTIEBOLAGET LM ERICSSON (publ) [SE/SE]; S-126 25 Stockholm (SE).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): HERSOUG, Ellef [SE/SE]; Brännkyrkagatan 92, S-117 26 Stockholm (SE). ADEBÄCK, Tomas [SE/SE]; Gitarrvägen 63, S-175 56 Järfälla (SE).

- (74) Agent: BERGENSTRÅHLE & LINDVALL AB; Box 17704, S-118 93 Stockholm (SE).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

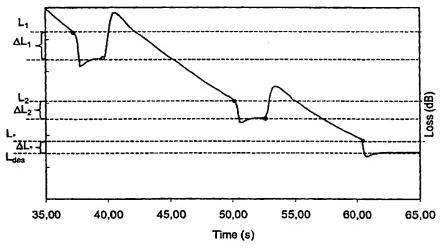
#### Published:

with international search report

[Continued on next page]

(54) Title: ATTENUATOR

### Real time measurement of loss



(57) Abstract: In the manufacture of an optical attenuator having a desired value of the optical loss end regions of two optical fibers are placed with an offset in the transverse direction in relation to each other and having their end surface at each other. Thereafter the region at end surfaces is heated to make the ends melt to each other and the heating is then further continued. To achieve the desired loss in the finished attenuating splice the further heating is stopped for an optical loss exceeding the desired loss by a calculated value. This value can be obtained from measurements in real time of the loss for the splice during the continued heating. The measurements can be made at the beginning and end of an interrupt of the further heating. An attenuator manufactured in this way obtains an attenuation that accurately aggres with the desired value.

**VO 02/065176**